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Remarks

Claims 1-60 were pending in the application. Claims 5, 13, and 20 have been canceled. Therefore, claims 1-4, 6-12, 14-19, and 21-60 remain pending in the application.

Claims 42-60 stand allowed.

Claims 2, 8, 11, 12, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include the limitations of the basic claim and any intervening claims.

Claims 1, 3-7, 9, 10, 13-18, 20-22, 25-30, 33, 34, 37, 40, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by WO-A-0014921, hereinafter, Calderbank et al.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Calderbank et al.

Claims 19, 36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calderbank et al. in view of United States Patent No. 6,775,620 issued to Dabak et al. on August 10, 2004.

Each of the various rejections and objections are overcome by amendments that are made to the claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

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Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

**Rejection Under 35 U.S.C. 102**

Claims 1, 3-7, 9, 10, 13-18, 20-22, 25-30, 33, 34, 37, 40, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by WO-A-0014921 (Calderbank et al.).

This ground of rejection is respectfully avoided.

Each of applicants' currently amended independent claims requires that each of the time sequences spans  $L$  symbol periods,  $L > 2$ , and that each time sequence includes at least one derivative of at least one symbol from each of the  $I$  data substreams. This is not taught or suggested by Calderbank et al., which shows in FIG. 2 that derivatives of symbols from only the first data stream are transmitted via antennas 44 and 45, while derivatives of symbols from only the second data stream are transmitted via antennas 54 and 55. Thus, clearly, Calderbank et al. does not teach that each of the time sequences includes at least one derivative from each of said  $L$  data substreams since antennas 44 and 45 do not transmit any derivative of any symbol from the second substream while antennas 54 and 55 do not transmit any derivative of any symbol from the first substream.

Since all of the dependent claims that depend from the currently amended independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over

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Calderbank et al. Therefore, applicants' claims 1, 3-7, 9, 10, 13-18, 20-22, 25-30, 33, 34, 37, 40, and 41 are allowable over Calderbank et al. under 35 U.S.C. 102.

**Rejection Under 35 U.S.C. 103(a)**

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Calderbank et al. Also, claims 19, 36, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calderbank et al. in view of United States Patent No. 6,775,620 issued to Dabak et al. on August 10, 2004.

Each of these grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. 102 given Calderbank et al. Since the rejection under 35 U.S.C. 102 given Calderbank et al. has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Dabak et al. supplies that which is missing from Calderbank et al. to render the independent claims anticipated, these grounds of rejection cannot be maintained.

Therefore, applicants' claims 26, 19, 36, 38, and 39 are allowable under 35 U.S.C. 103(a).

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**Conclusion**

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

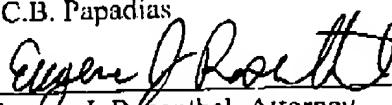
If, however, the Examiner still believes that there are unresolved issues, he is invited to call applicant's attorney so that arrangements may be made to discuss and resolve any such issues.

In the event that an extension of time is required for this amendment to be considered timely, and a petition therefor does not otherwise accompany this amendment, any necessary extension of time is hereby petitioned for, and the Commissioner is authorized to charge the appropriate cost of such petition to the **Lucent Technologies Deposit Account No. 12-2325.**

Respectfully,

G.J. Foschini

C.B. Papadias

By 

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Lucent Technologies Inc.

Date: 3/10/05

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